DEC STD 012-9 Unified Numbering Code - 94-Class Tool Numbering Conventions and Assignment Procedures

DOCUMENT IDENTIFIER: A-DS-EL00012-09-0000 Rev B1, 11-Oct-1990

ABSTRACT: This section of DEC STD 012 defines the requirements for the assignment and control of 94-class tool identifiers.

APPLICABILITY: The requirements of this standard are mandatory for use by Digital personnel that generate and control the documentation for manufacturing tools.

STATUS: APPROVED 05-Oct-1990; use VTX SMC for current status.

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1 INTRODUCTION

1.1 PURPOSE

This section of DEC STD 012 describes the numbering conventions and assignment procedures for 94-class tools.

1.2 SCOPE

This standard applies to all Digital-owned manufacturing-related tools.

1.3 RESPONSIBILITIES

1.3.1 Requesters of Tool Identifiers

Requesters of 94-class tool identifiers are responsible for following the procedures and providing the information and related required documentation for that tooling, as defined in this standard.

1.3.2 Plant Tool Administrators

Plant Tool Administrators are responsible for issuing 94-class tool identifiers to requesters, for entering data into the Computerized Tool Program (described under heading 6), and for storing and controlling tooling documentation.

1.3.3 Regional Tool Administrators

Regional Tool Administrators are responsible for maintaining and providing information about 94-class tooling through the Computerized Tool Program, and recording all changes to tooling status. Where there is no Plant Tool Administrator, the Regional Tool Administrator performs the Plant Tool Administrator functions.

The Regional Tool Administrator for the US, GIA, and Germany is Central Specification Control Systems (CSCS), NRO5/M2, DTN: 234-5073, TIS::LEPIRE. The Regional Tool Administrator for Europe (except Germany) is Ian Kelso, AYO, DTN 823-4259.

1.3.4 Central Specification Control Systems (CSCS)

Central Specification Control Systems (NRO5/M2, DTN: 234-5073) is responsible for providing requesters with additional information on tooling documentation and use of the Computerized Tool Program.

2 TOOL IDENTIFIER ASSIGNMENT POLICIES

2.1 ISSUE OF TOOL IDENTIFIERS

94-class tool identifiers are issued through Plant Tool Administrators. A Tool Request Form (TRF) must be filled out in order to obtain an identifier. See subhead 4.1 for a description of the TRF.

2.2 DOCUMENTATION OF TOOLING

Digital-owned tooling is documented on reproducible drawings. This documentation may consist of formal drawings, photographs, or other media. See heading 5 for a description of tool documentation requirements. For further information, contact CSCS (NRO5/M2), DTN: 234-5073, TIS::LEPIRE.

2.3 MARKING OF TOOLING

Digital-owned tooling must be marked with the following.

a. "Property of Digital Equipment Corporation"

b. 94-class number

c. Tool revision

d. Part number of item for which tool is to be used

e. Asset number (if tool is capitalized) on sticker

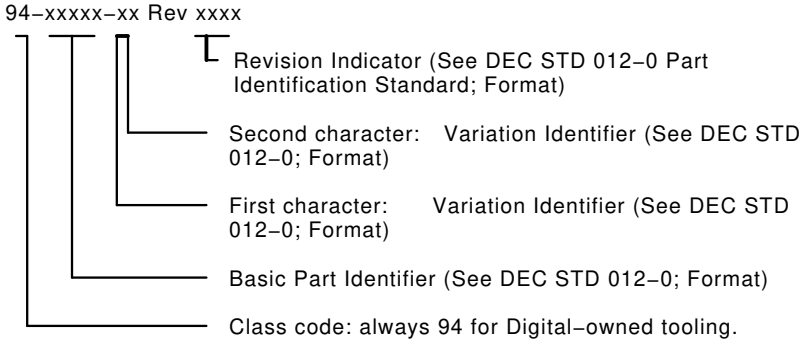
Optional markings may include pertinent information on use of the tool.

3 94-CLASS TOOL IDENTIFIERS

The definition of 94-class is as follows, as defined in *DEC STD 012-2 Unified Numbering Code for Part Identifier Class Codes*.

> "Dies, jigs, fixtures, molds, gauges, assembly tooling, N/C tapes and long range tooling for manufacturing operations. All tools in the 94-class category are not recognized as standard cost items. Therefore, no standard costs will be set for them."

Each 94-class identifier designates a unique tool: identical tools have different identifiers, as explained in subhead 3.2.2 of this document.


94–xxxxx–xx Rev xxxx
Revision Indicator (See DEC STD 012–0 Part Identification Standard; Format)
Second character: Variation Identifier (See DEC STD 012–0; Format)
First character: Variation Identifier (See DEC STD 012–0; Format)
Basic Part Identifier (See DEC STD 012–0; Format)
Class code: always 94 for Digital–owned tooling.

3.1 BASIC PART IDENTIFIER

The basic part identifier field identifies the tool number, which is numeric, non-significant, and sequentially assigned.

3.2 VARIATION IDENTIFIER

3.2.1 First Character: Tool Type

The first character of the variation identifier field indicates into which of five categories the tool fits. These include:

94-xxxxx-1x: Fabrication Tooling

- Special cutting tools and tool holders
- Special machine tools
- Jigs and fixtures for machining
- Dies for sheet metal
- Dies for forging, upsetting, cold finishing, and extrusion
- Dies for metal casting or plastic molding
- Patterns for permanent molds
- Special fixtures for grinding, finishing, and honing

94-xxxxx-2x: Assembly Tooling

Fixtures and accessories for welding, riveting, and other assembling processes.

94-xxxxx-3x: Quality Control Tooling

Gauges and special measuring fixtures.

94-xxxxx-4x: N/C (Numerically-Controlled) Tapes

Tapes required to drive numerically-controlled equipment for the machining, punching, or gauging of parts or assemblies.

94-xxxxx-5x: Automated Assembly Aids

Specially designed assembly aids such as totes, flexure clips, or clean room entrance trays. These tools may be purchased in high volume but still have high individual cost due to their specificity. Any tool in this category will not be accountable during a tooling audit. Therefore, great caution should be used when assigning this type of tool number and its lack of traceability communicated.

3.2.2 Second Character: Duplicate Tools

The second character of the variation identifier field is alphabetic and is used to designate duplicate tools.

Examples:

94–xxxxx–1A	Only one of this fabrication tool exists.
94–xxxxx–1A 94–xxxxx–1B 94–xxxxx–1C	Three identical fabrication tools exist.

3.3 REVISION INDICATOR

The revision indicator follows the scheme outlined in DEC STD 012-0 for part revisions. See heading 6 for more information on revision and other status changes.

4 TOOL REQUEST PROCEDURE

The requester of a tool, whether manufacturing, engineering, purchasing, or another group, must fill out a Tool Request Form (TRF). See Figure 1 Electronic Tooling Request Form.

4.1 TOOLING REQUEST FORM (TRF)

The requester fills out a TRF (refer to Figure 1 for instructions) and has the option of either mailing it via ENET, or phoning in the information to the Regional or Plant Tool Administrator, who will then fill out a TRF. To obtain a copy of the ENET TRF, contact CSCS, DTN: 234-5073, or VMSmail address TIS::LEPIRE.

4.2 TOOL ADMINISTRATOR

The Tool Administrator enters data from the TRF into the Computerized Tool Program. A 94-class identifier is assigned. The TRF is filed and the requester is notified.

Figure 1: Electronic Tooling Request Form

Number in parentheses at end of lines indicates character quantity.

* = Mandatory field

TOOLING REQUEST

Tool No. 94-_____

Computerized tool listing

* Number of identical tools	(2)
* Tool description	(30)
Tool type	(1)
* Tool documentation	(1)
Tool revision	(4)
* Tool cost	(6)
* Tool life	(7)
* Requester name	(30)
Tool designer name	(30)
Vendor code	(7-3)
* Vendor name	(20)
* Vendor state/country	(3)
* Digital location	(3)
* Production line	(8)
* Cost center	(4)
Project number	(8)
Account number	(4)
Asset number	(15)
Ship & bill number	(6)
Tool p.o. Number	(10)
Last physical inventory date	(6)
* Part number	(2-5-2)
Part description	(53)
Additional information	

Figure 2: Electronic Tooling Request Form Explanations

Number in parentheses at end of lines indicates character quantity.

TOOLING REQUEST

TOOL NO.______

COMPUTERIZED TOOL LISTING

NUMBER OF IDENTICAL TOOLS	(2)	How many identical tools (constructed from the same design) will be made. (Example: 94-12654-3a gauge in Westfield and 94-12654-3b gauge at vendor)
TOOL DESCRIPTION	(30)	Description or title of tool (Example: Pierce die)
TOOL TYPE	(1)	1 = FAB tool, 2 = assembly tool, 3 = Q.C. tool, 4 = N.C. Tape or tool, 5 = Automated assembly aids
TOOL DOCUMENTATION	(1)	Type of tool documentation in existence. (Example: Formal Drawing = F, Photograph = P, No documentation = N)
TOOL REVISION	(4)	Latest revision of tool (Example: A01)
TOOL COST	(6)	Total cost to design and build the tool in U.S. dollars. (Example: 1500)
TOOL LIFE	(7)	Total number of parts to be produced during the life of the tool. (Example: 100,000)
REQUESTER NAME	(30)	Name of person requesting tool number
TOOL DESIGNER NAME	(30)	Name of digital engineer designing the tool
VENDOR CODE	(7-3)	The vendor purchasing code number where the tool will be located. if it is a Digital facility, use the Digital location vendor code. (Example: 4444-000)
VENDOR NAME	(20)	(Example: united tool and die)
VENDOR STATE/COUNTRY	(3)	Two-digit state location or three-digit country code per international standard ISO 3166 for countries outside the USA (example: MA)
DIGITAL LOCATION	(3)	Digital plant location code (Example: PKO)
PRODUCTION LINE	(8)	The production line of the part (Example: RF30)
COST CENTER	(4)	Cost center that tool cost will be charged against (Example: 43T)

Figure 2: Electronic Tooling Request Form Explanations (cont.)

TOOLING REQUEST		
PROJECT NUMBER	(8)	Engineering or manufacturing project number (Example: X9515261)
ACCOUNT NUMBER	(4)	(Example: 2153)
ASSET NUMBER	(15)	If capitalized, the asset number of the tool (EXAMPLE: 15621)
SHIP & BILL NUMBER	(6)	Number of authorization document used to move the tool to another location
TOOL P.O. NUMBER	(10)	The complete tooling purchase order number or requisition number (Example: MF816113)
ADDITIONAL INFORMATION		
LAST PHYSICAL INVENTORY DATE	(6)	The date tool was last seen (Example: 830101 [YYMMDD])
PART NUMBER	(2-5-2)	The part that the tool will make, assemble or gauge (Example: 74-xxxxx-01)
PART DESCRIPTION	(53)	Part description as shown on the master parts file (Example: bracket)

5 TOOL DOCUMENTATION

The requester of a tool must also provide tooling documentation in one of the following forms:

Formal Drawings: All Digital-owned tooling should be documented in the form of formal drawings, if possible. These drawings shall be of the type that can be reproduced on a blueprint machine or similar device. All original drawings, sepias, or other reproducible documents should be submitted to Micrographics for microfilming and storage. Micrographics sends a microfilm copy of the drawings to the pertinent Digital facilities. See *DEC STD 033-0 Microfilm Aperture Cards - Creation and Distribution Process* for further information.

Some satellite facilities may prefer to maintain tool drawings within their own microfilm and storage area. If so, they must follow the same procedure as described in DEC STD 033-0 for microfilming and dispersing of documentation.

Photographs: If formal drawings are not available, documentation in the form of photographs should be provided.

Some satellite facilities may prefer to maintain tool photographs at their own Digital facility. Each tool should be photographed from a minimum of three views: top view, side or front view, and the plan (inside or working) view.

6 CHANGES IN TOOL STATUS

Requesters of tooling must inform their Regional Tool Administrator of changes to the status of Digital-owned tooling. Types of tool status changes include:

- Revision change: rework of tool because of an engineering change order to the part being produced that also necessitates a tool change
- Tool transfer: when the tool is moved to a different location
- Obsolescence: when the tool still exists but is no longer in use
- Scrap: when the tool is to be destroyed
- Addition of identical tool: another copy of this tool now exists (see subhead 3.2.2)
- Addition/deletion of part number: change to the number of items produced using this tool

Regional Tool Administrators use the new status information to update the data in the Computerized Tool Program.

APPENDIX A REFERENCED DOCUMENTS

A.1 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00012-00	*DEC STD 012-0 Part Identification Standard*
EL-00012-02	*DEC STD 012-2 Unified Numbering Code for Part Identifier Class Codes*
EL-00033-00	*DEC STD 033-0 Microfilm Aperture Cards - Creation and Distribution Process*

Use VTX SMC to order copies of EL-class documents from Standards and Methods Control. Send distribution questions to JOKUR::SMC or call DTN: 234-4423.

A.2 Other Documents

Document Number	Document Title
ISO 3166-1981 (E/F)	*Codes for the Representation of Countries*

A.3 Ordering Information

Following are the sources for documents not available from Standards and Methods Control.

- ANSI, IEC, and ISO Documents
  American National Standards Institute (ANSI),
  1430 Broadway, New York, NY 10018,
  Telephone (212) 354-3300 x479

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